BEFORE THE PUBLIC SERVICE COMMISSION, THE DEPARMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, THE OFFICE OF MANAGEMENT AND BUDGET, AND CONTROLLER GENERAL OF THE STATE OF DELAWARE

PSC DOCKET NO. 06-241, REVIEW AND APPROVAL OF THE REQUEST FOR PROPOSALS FOR THE CONSTRUCTION OF NEW GENERATION RESOURCES UNDER 26 DEL. C. § 1007(d)

Reply on WGES Land-Based Wind Price Comparisons

Jeremy Firestone and Willett Kempton 13 December 2007

Introduction

On November 12, we filed Recommendations on the Delmarva Power/Bluewater Wind Term Sheets, which included a comparison to Washington Gas Energy Service's (WGES) land-based wind offerings. On December 7, 2007, WGES filed a response to that analysis and copied members of the legislature contending that our analysis was "completely incorrect." Here, we provide a more detailed, step-by-step analysis with the updated Power Purchase Agreement (PPA) numbers, add in factors that WGES alleges we should have included, and correct for misunderstandings of WGES. We do not include WGES claims of other costs which it has not monetized. We had hoped to resolve any differences with WGES before filing this document, but given the very tight filing deadlines established in this docket, we were unable to speak at any length or depth. We look forward to discussing this matter further with WGES; and WGES or we may file an amended comment to further clarify this issue.

The bottom line is that, with the refinements to our comparison offered by WGES, along with the final price of the Delmarva/Bluewater Power Purchase Agreement (PPA), the Bluewater Wind price still appears to be lower than the price offered today by WGES.

Since WGES seems to be concerned about this conclusion, we should be clear that the purpose of our original testimony, as well as the present more detailed comparison, is not to criticize the prices being offered by WGES. We take no opinion on that as we have not done an analysis, that was not the subject of the docket we submitted to, and no one in Delaware has publicly drawn that conclusion. Indeed, we appreciate that WGES has made wind power available to Delaware customers prior to Delaware having its own project. Our intent is merely to demonstrate that the Delmarva/Bluewater Power Purchase Agreement (PPA) price for offshore wind compares favorably on price to wind presently offered to residential customers by WGES in the Delmarva Power service area, and is thus, not unreasonable. Whether the WGES offering is a few percent more or less than the Delmarva/Bluewater PPA is not material, since the WGES offering provides only two years of price stability while the Delmarva/Bluewater PPA offers 25 years of price stability. The Delmarva/Bluewater PPA also offers health, employment, and economic development benefits for Delaware that cannot be offered by distant out-of-state wind power.

¹ WGES first gave us notice of their letter yesterday afternoon via email at 4:35 p.m., the day before the filing deadline for this docket Although this is a regulatory, not a legislative proceeding, they informed us that they had sent it to two Delaware legislators and would shortly send it to the entire Delaware Legislature. One legislator has asked for our response.

Analysis

As we noted, one of the arguments raised on this docket against Delaware offshore wind is that it is too expensive as compared to regional onshore wind. A comparison to WGES rates for power including 25% and 100% onshore wind, which it now offers to Delaware SOS customers, is one of several types of analyses that we have provided.

WGES offers Delaware SOS customers a one-year contract for 25% onshore wind for 12.2c/kWh (see https://www.wges.com/enroll/index.php). That is, the current WGES offering for a comparable fraction (25%) of onshore wind has a price about 8 percent more than Delmarva Customers currently pay for energy. This is an "apples versus apples comparison"—both the WGES and current Delmarva prices are "all-in" prices. We await the independent consultant's analysis to make a direct comparison should the agencies approve the PPA.

WGES offers 100% onshore wind, in one and two year contracts (see https://www.wges.com/enroll/index.php). It is offered at 13.90¢/kWh for 1 year or 14.50¢/kWh for two years. The two-year contract also bundles two years of price stability. As a first summary comparison, we previously compared WGES' 100% offer with wind only from Bluewater Wind (by itself effectively 100%). Basing our comparison on the proposed Delaware PPA contract, the (energy and capacity) prices from the Bluewater Wind project are 10.82¢/kWh in 2008 and 11.15¢/kWh in 2009. That is, in year 1, the currently-offered WGES land-based wind is 22% more expensive than the PPA price, and for the two-year combined price, 24% over the PPA price.

We intended this as a rough comparison as a benchmark as to whether on-land wind power that is already being offered to retail customers would be much less expensive than the proposed project. For that reason, and because the components of WGES retail offereing were not previously revealed to us, we did not analyze it in depth.

In its December 7, 2007, filing WGES takes issue with our analysis because we did not include RECs, ancillary services, and distribution losses. It pegs ancillary services at .1175¢/kWh, and distribution losses for energy at 6.4% (translating into a 0.90¢/kWh cost for distribution losses)².

We have two concerns with the way that WGES calculated the REC price component of the offshore wind bid. First, Delaware's law requires REC compliance—that is, a compliance cost based on the RPS law that in our view is not a cost to be borne solely by wind customers but by all WGES Delaware customers. Moreover, the RECs that Delmarva will purchase need to be allocated not just to the wind fraction of load, but to the entire load and be pegged to the REC percentages required under Delaware law (thus, we do not include RECs that Delmarva would allocate or sell to the non-RSCI load).

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² It is not clear how WGES translates 6.4% to result in a 0.80¢/kWh charge; our understanding is that while Delmarva must acquire an additional 6.4% of <u>total</u> energy to account for potential energy losses, resulting in higher energy costs, the figure quoted by WGES, which is ~8% of the Bluewater energy price is too high.

If we conservatively add 0.90 ¢/kWh to account for ancillary services and distribution losses as WGES claims in its letter of December 7, 2007 (we are not necessarily agreeing with WGES's analysis—see footnote 1, just taking it as a given), those amounts increase to 11.72 ¢/kWh in 2008^3 and 12.05 ¢/kWh in 2009 or an average of 11.89 ¢/kWh for the two year average.

The REC percentages in Delaware law are conservatively set at 3% 2008, and 4% for 2009.⁴ If one multiples by REC price, 1.975¢/kWh, by these fractions, the REC cost per MWh, spread out over all MWhs consumed by Delmarva residential customers is .06¢/kWh in 2008 and .08¢/kWh in 2009. If we add these amounts to the wind price, we get 11.78¢/kWh in 2008 and 12.13¢/kWh in 2009, or an average of 11.96¢/kWh for the two years. In other words, using all of the metrics that WGES monetized, the price of Bluewater Wind is still 18% cheaper in 2008 and 21% cheaper over the two-year premium charged by WGES for land-based wind.⁵

These simple but real market comparisons show that the offshore wind PPA is likely cheaper than the only real onshore wind offering in DP service territory. It also shows that with the small 2.5% inflator, it will likely trend better than short-term purchases for wind in the market.

Respectfully submitted,

Jeremy Firestone Willett Kempton

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³ As it is now December 2007, we conservatively use 2008 as the base year.

⁴ The compliance percentages are likely less, as by regulation, the PSC decreased the percentage for that portion of the load acquired through SOS auctions in 2005 and 2006, presumably to grandfather those contracts under the then-existing law. Here, however, to be conservative, we use the higher percentages.

⁵ Even if we were to incorrectly allocate the entire REC cost as WGES did (1.975¢/kWh, and inflated each year) to each PPA-generated kWh, the price of the PPA wind would still be cheaper than WGES wind.